ABSTRACT

The present invention relates to insulin crystals formed from zinc, protamine, a hexamer-stabilizing compound, and a polypeptide selected from the group consisting of insulin, an insulin analog, and a derivatized insulin. The crystals are suitable for administering to a patient for control of blood glucose levels. The crystals have been derived from the neutral protamine Hagedorn (NPH) form in a process utilizing precisely determined protamine concentrations and fortification of NPH crystals formed at a first lower concentration of protamine to achieve a second higher concentration of protamine.